



## (C) Pattern and Social Network Analysis

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Run Date: 08/20/2003

(C) As analysts, you know that all data sets and intelligence needs are not created equal; consequently there is no "one-methodology-fits-all" approach to apply to SIGINT problems. It's very challenging to know when to apply different methodologies to achieve the results we need. Social Network Analysis (SNA) and Pattern Analysis are analytic methodologies that have been successful against counterterrorism targets and may likely prove successful in pursuing other targets.

### (C) Social Network Analysis

(C) As a practical example, when you want to influence your boss's decision on an important matter, how and through whom do you relay your point of view? Based on your own SNA of the workplace, you will contact the person in the best position to influence your boss and you'll communicate via the mode that you consider most effective. Your target works that way too, and the better you understand the structure of the social networks, the better your chances of finding weaknesses that can be leveraged for SIGINT advantage.

(S//SI) SNA can help you identify people who, although they may not be significant in the "official" leadership hierarchy, have influential personal ties to people in high places. This is possible because SNA consolidates large volumes of current SIGINT reporting to provide a bird's eye view of a network and how it is connected. SNA conducted against two years' worth of SIGINT data on terrorist Abu Zubaida and his network showed a highly interconnected group of 300 terrorists who were still largely connected even after Zubaida was arrested and removed from the picture. This stands in sharp contrast to open source "conventional wisdom" which holds that terrorist organizations are structured into isolated cells, where most of the people have little knowledge of or contact with others.

### (C) Pattern Analysis

(S//SI) How can NSA help find the al-Qa'ida terrorists who may soon carry out an attack in the U.S., without knowing their names or anything else about them? One answer is the Terrorist Threat Pattern Analysis Model developed by the Counterterrorism Strategic Intelligence and Operations Center (SIOC). CT SIOC thoroughly analyzed the calamitous events of 11 September 2001 (and the events leading up to it) to try to stop such an event from occurring again. That analysis revealed that most of the September 11th hijackers were not known to intelligence services throughout the world and, therefore, did not draw the attention of those services. Without knowing in advance that these people were terrorists, and with no names, passport numbers, or other identifying information, the Intelligence Community could not track them. Pattern analysis helps us defeat such a foe. By determining



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the way in which the terrorists traveled, received finances, obtained identifications, and carried out operational activities, it was possible to develop a model of their operational patterns. By converting that model into algorithms and running those algorithms against SIGINT, NSA hopes to identify potential terrorists base on their patterns of activity before they are able to carry out their attacks.

## **(U) Conclusion**

(C) So, if you don't know exactly who your target is, but he repeats his methods of operations, pattern analysis may help you find him. Likewise, if you want to uncover people or ascertain their significance and role in your target network, you might want to try SNA. Hopefully, we've given you some food for thought so you can begin to look at your target in a different way and consider employing these methodologies to your SIGINT advantage. The [CT SIOC](#) stands ready to provide more specifics on Pattern Analysis, and the [Social Network Analysis Workcenter](#) ("go sna") is poised to consider your target for study.

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DERIVED FROM: NSA/CSSM 1-52, DATED 08 JAN 2007 DECLASSIFY ON: 20320108